



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,437	12/18/2001	Tadaharu Nishimura	2018-477	1675
23117	7590	02/10/2005	EXAMINER	
NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714			LAO, SUE X	
			ART UNIT	PAPER NUMBER
			2126	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/020,437	NISHIMURA, TADAHARU	
	Examiner	Art Unit	
	Sue Lao	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/18/01, 4/26/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-12 are presented for examination.
2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 10-12 appear to recite conflicting confusing limitations regarding tasks. For example, claim 1, recites "a plurality of tasks each of which includes at least one event process" in lines 8-9, "a task which includes an event process corresponding to an event" in lines 12-13, "said task includes an event process other than said event process corresponding to said event" in lines 21-23, "said task includes a plurality of event processes" in lines 26-27, "dedicated task, which is created as one of said plurality of tasks for executing only one event process" in lines 33-34. It is unclear how these recitations of tasks and dedicated task relate and differ from one another. It is recommended that the various claimed tasks are clarified using the terminology as disclosed in the application as filed, such as shared tasks, dedicated tasks.

Further, claim 1 recites "if said task includes an event process other than said event process corresponding to said event" in lines 21-22 and "if said task includes a plurality of event processes" in lines 26-27. It is unclear whether the limitations introduced by "if" is required, as "if" is typically understood as including both "if" and "if not". It is suggested a positive recitation such as "when" instead of "if" be used to introduce a required limitation.

Claims 10-12 recite similarly regarding "tasks" and "if". Claims 2-7 depend from claim 1.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant admitted prior art (APA) ([0004] – [0015]) in view of Anderson et al (U S Pat. 5,448,735).

As to claim 1, APA teaches a processor unit for executing an event process in response to occurrence of a plurality of predetermined events, comprising: a program (control program) for executing an event process (event process) in response to occurrence of said plurality of predetermined events (events), said processor unit, wherein said program comprises:

a plurality of tasks (tasks A, B, C) each of which includes at least one event process which is executed in response to occurrence of one of said plurality of predetermined events (fig. 5);

an activation request program (activation request program) for requesting activation of a task which includes an event process corresponding to an event in response to occurrence of said event (fig. 5); and

a real time operating system (RTOS) for activating said task in response to the request for activation of said task (fig. 5),

wherein said activation request program stores identification information (store ID) on said event process corresponding to said event in a storage area in response to occurrence of said event, if said task includes an event process other than said event process corresponding to said event ([0012], [0014]),

wherein said task, which is activated by said real time operating system, obtains the identification information on said event process from said storage area if said task

Art Unit: 2126

includes a plurality of event processes, and executes said event process corresponding to the obtained identification information (RTOS activates, [0006], [0012]. See APA, [0004] – [0015], fig. 5.

APA further teaches at least one specific event (4ms process, 8 ms process, 30 degree crank angle). While APA does not use the term dedicated task, APA teaches a task which is created as one of said plurality of tasks for executing only one event process (4ms process, 8ms process, [0008]-[0009]. It would have been obvious to call them dedicated tasks.

APA does not teach so that said dedicated task identifies the event process corresponding to the specific event for execution without obtaining identification information from said storage area when said dedicated task is activated.

Anderson teaches task management, wherein a task (real-time task modules) identifies a event process (DSP module) corresponding to a specific event (DSP request). Anderson does not obtain identification information from a storage area when the task is activated in that the skip count variable which is an integral part of a task module controls the module execution flow. See col. 19, line 16 – col. 20, line 16. Anderson applies to a task for executing only one event process / dedicated task (task 612 containing module 624, fig. 6).

Therefore, it would have been obvious to activate a dedicated task without obtaining identification information from the storage area in APA. One of ordinary skill in the art would have been motivated to combine the teachings of APA and Anderson because this would have provided a means for flow control within a task such that resources are not needlessly consumed when certain subtasks or modules are not required to be performed (Anderson, col. 2, lines 59-62).

As to claim 2, APA teaches one of a plurality of priority levels is assigned to each of said plurality of tasks and said event process included therein, and a same priority level is assigned to a task and an event process included therein, and wherein said real time operating system activates said task in response to the request for activation of said task if a priority level of said task is higher than a priority level of an active task ([0006], [0008], [0010]).

Art Unit: 2126

As to claim 3, APA teaches a cyclic event which occurs in a cycle is selected as said specific event (4ms, 8ms events, [0008]-[0009]).

As to claims 4, 8, APA teaches said processor unit executes an event process in response to the occurrence of one of said plurality of predetermined events for controlling a predetermined object (engine), and wherein a cyclic event which occurs in synchronous with a run cycle of said predetermined object is selected as said specific event (4ms process, 8ms process, [0008]-[0009]).

As to claim 5, APA teaches an event, which is not eliminated from said plurality of predetermined events when a system in which said processor unit is incorporated is modified, is selected as said specific event (fault detection process, [0009]).

As to claim 6, APA teaches an event, in response to which it is unnecessary that said activation request program passes data to a task which includes a corresponding event process, is selected as said specific event (4 ms process, 8 ms process, Tdc process, engine stall process, [0009]).

As to claim 7, APA teaches a shared task of a priority level is created for each of said plurality of priority levels, and said shared task includes at least one event process which is assigned a priority level same as a priority level of said shared task and is other than said specific event ([0006], [0008], [0010]).

As to claim 9, APA teaches the cyclic event selected as said specific event is an event which occurs in synchronous with an engine cycle (30 degree CA, [0008]).

As to claim 10, note discussions of claims 1 and 2. APA further teaches the storage area is a queue ([0012]).

As to claim 11, note discussion of claims 1 and 2. APA further teaches memory area (storage area / queue, ([0012])).

6. Claim 12 would be allowable over the prior art on record if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action, and subjected to a final search.

Art Unit: 2126

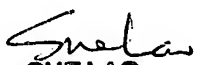
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue Lao whose telephone number is (571) 272-3764. A voice mail service is also available at this number. The examiner's supervisor, SPE Meng-Ai An, can be reached on (571) 272 3756. The examiner can normally be reached on Monday - Friday, from 9AM to 5PM. The fax phone number for the organization where this application or proceeding is assigned is (703) 872 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 7, 2005


SUE LAO
PRIMARY EXAMINER